

SEQUENCE LISTING

<110> Milbrandt, Jeffrey D.
Baloh, Robert H.

<120> Artemin, A Novel Neurotrophic Factor

<130> 6029-7996

<140> 09/220,920

<141> 1998-12-24

<150> 09/163,283

<151> 1998-09-29

<150> 60/108,148

<151> 1998-11-12

<150> 09/218,698

<151> 1998-12-22

<160> 120

<170> PatentIn Ver. 2.0

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<211> 696

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gcggcaggag	ccgctgcaga	agcggaacg	caccagctcg	tcggagcgg	ggccaggcc	300
gagcgcgcg	accggcacca	gctgcgagcg	caggcggcag	ccccgcgcc	ccgctgccg	360
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actgcaccag	cgggccgtgc	gtccccctgg	aatgagacc	agtcacgcg	ggtgtccc	540
gccagccccg	ccccgcccc	tcgccctctc	acctaccgg	caggtggccg	gcgggggacg	600
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<210> 3

<211> 113

<212> PRT



<213> Homo sapiens

<400> 3

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 20 25 30
 Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg
 35 40 45
 Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala
 50 55 60
 Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys
 65 70 75 80
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<210> 4

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<213> Homo sapiens

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 Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly
 35 40 45
 Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu
 50 55 60
 Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser
 65 70 75 80
 Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp
 85 90 95
 Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys
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 Gly Cys Leu Gly
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<210> 5

<211> 140

<212> PRT

<213> Homo sapiens

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 Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln
 35 40 45
 Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu
 50 55 60
 Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro
 65 70 75 80
 His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro
 85 90 95
 Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg
 100 105 110
 Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val
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 ctactgggccc ccggggccct gcgaccgccc ccgggctccc ggcccgtcag ccagccctgc 240
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 <212> DNA
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 gtgcgtttcc gcttctgcag cggctcctgc ccgcgcgcgc gctctccaca cgacctcagc 180
 ctggccagcc tactgggccc cggggccctg cgaccgcccc cgggctcccg gcccgtcagc 240
 cagccctgct gccgaccac gcgctacgaa gcggtctcct tcatggacgt caacagcacc 300
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<210> 8
 <211> 423
 <212> DNA
 <213> Homo sapiens

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 cggggctgcc gcctgcgctc gcagctggtg ccggtgcgcg cgctcggcct gggccaccgc 180
 tccgacgagc tgggtcggtt ccgcttctgc agcggctcct gccgcgcgc gcgctctcca 240
 cagcagctca gcctggccag cctactgggc gccggggccc tgcgaccgcc cccgggctcc 300

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cgccccgtca gccagccctg ctgccgaccc acgcgctacg aagcgggtctc cttcatggac 360
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<210> 9
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<212> DNA
<213> Homo sapiens

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ccgggagccc gggggcggtc gcagggcccc ggcgccagc aggctggcca ggctgaggtc 180
gtgtggagag cgcgcgcggc ggcaggagcc gctgcagaag cggaacgca ccagctcgtc 240
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<210> 10
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gtgtggagag cgcgcgcggc ggcaggagcc gctgcagaag cggaacgca ccagctcgtc 240
ggagcgggtg cccaggccga gcgcgcgcac cggcaccagc tgcgagcgca ggcggcagcc 300
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<210> 11
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<212> DNA
<213> Homo sapiens

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<212> PRT
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      20           25           30

Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly
      35           40           45

Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu
      50           55           60

Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser
      65           70           75           80

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APR 11 2000

Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala
 85 90 95

Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala
 100 105 110

Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg
 115 120 125

Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp
 130 135 140

Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
 145 150 155

<210> 13
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 13
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Gln Ala Ala Ala Ala Asn Pro Glu Asn Ser Arg Gly Lys Gly Arg Arg
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Gly Gln Arg Gly Lys Asn Arg Gly Cys Val Leu Thr Ala Ile His Leu
 35 40 45

Asn Val Thr Asp Leu Gly Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile
 50 55 60

Phe Arg Tyr Cys Ser Gly Ser Cys Asp Ala Ala Glu Thr Thr Tyr Asp
 65 70 75 80

Lys Ile Leu Lys Asn Leu Ser Arg Asn Arg Arg Leu Val Ser Asp Lys
 85 90 95

Val Gly Gln Ala Cys Cys Arg Pro Ile Ala Phe Asp Asp Asp Leu Ser
 100 105 110

Phe Leu Asp Asp Asn Leu Val Tyr His Ile Leu Arg Lys His Ser Ala
 115 120 125

Lys Arg Cys Gly Cys Ile
 130

<210> 14
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 14
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 20 25 30

Arg Tyr Cys Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp Leu
 35 40 45

Gly Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val
 50 55 60
 Arg Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser
 65 70 75 80
 Phe Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala
 85 90 95
 Arg Glu Cys Ala Cys Val
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<210> 15
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 <212> PRT
 <213> Homo sapiens

<400> 15
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 20 25 30
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 35 40 45
 Leu Ala Arg Leu Gln Gly Gln Gly Arg Ala His Gly Gly Pro Cys Cys
 50 55 60
 Arg Pro Thr Arg Tyr Thr Asp Val Ala Phe Leu Asp Asp Arg His Arg
 65 70 75 80
 Trp Gln Arg Leu Pro Gln Leu Ser Ala Ala Ala Cys Gly Cys Gly Gly
 85 90 95

<210> 16
 <211> 93
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 20 25 30
 Asp Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu Lys Asn Leu Ser Arg
 35 40 45
 Asn Arg Arg Leu Val Ser Asp Lys Val Gly Gln Ala Cys Cys Arg Pro
 50 55 60
 Ile Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp Asp Asn Leu Val Tyr
 65 70 75 80
 His Ile Leu Arg Lys His Ser Ala Lys Arg Cys Gly Cys
 85 90

<210> 17
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 17
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 35 40 45
 Arg Arg Arg Leu Arg Arg Glu Arg Val Arg Ala Gln Pro Cys Cys Arg
 50 55 60
 Pro Thr Ala Tyr Glu Asp Glu Val Ser Phe Leu Asp Ala His Ser Arg
 65 70 75 80
 Tyr His Thr Val His Glu Leu Ser Ala Arg Glu Cys Ala Cys
 85 90

<210> 18
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 <212> PRT
 <213> Homo sapiens

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 20 25 30
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 35 40 45
 Gly Gln Gly Arg Ala His Gly Gly Pro Cys Cys Arg Pro Thr Arg Tyr
 50 55 60
 Thr Asp Val Ala Phe Leu Asp Asp Arg His Arg Trp Gln Arg Leu Pro
 65 70 75 80
 Gln Leu Ser Ala Ala Ala Cys Gly Cys
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<210> 19
 <211> 96
 <212> PRT
 <213> Homo sapiens

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 20 25 30
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 35 40 45

Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro
 50 55 60

Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn
 65 70 75 80

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 85 90 95

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 <212> DNA
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<210> 21
 <211> 37
 <212> DNA
 <213> Homo sapiens

<400> 21
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<210> 22
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 <212> DNA
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<210> 23
 <211> 37
 <212> DNA
 <213> Homo sapiens

<400> 23
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<210> 24
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 <212> DNA
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<210> 25
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<212> DNA

<213> Homo sapiens

<400> 25

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<210> 26

<211> 220

<212> PRT

<213> Homo sapiens

<400> 26

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      20           25           30

Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro
      35           40           45

Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His
      50           55           60

Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg
      65           70           75           80

Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro
      85           90           95

Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro Gly
      100          105          110

Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser Gln
      115          120          125

Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu Leu
      130          135          140

Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro
      145          150          155          160

His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Pro
      165          170          175

Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr Arg
      180          185          190

Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val
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 <213> MURINE

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<210> 28
 <211> 675
 <212> DNA
 <213> MURINE

<400> 28
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 aagtcccagt tccat 675

<210> 29
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 <213> MURINE

<400> 29
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 35 40 45
 Ala Ala Arg Asp Gly Pro Ser Pro Val Leu Ala Pro Pro Thr Asp His
 50 55 60
 Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu Arg Thr Leu Arg
 65 70 75 80
 Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro Pro Gly Pro Ala
 85 90 95
 Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg Ala Ala Arg Ala
 100 105 110

Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala Arg Gly Cys Arg
 115 120 125
 Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly His Ser
 130 135 140
 Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg
 145 150 155 160
 Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly
 165 170 175
 Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser Gln Pro Cys Cys
 180 185 190
 Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr
 195 200 205
 Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
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<210> 30
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 tggccacccc tggcgcgtct ggctctgctg agcagcgctc cagaggcctc cctgggctcc 180
 gcgccccgca gccctgcccc ccgcgaaggc ccccgccctg tcttggcgtc ccccgccggc 240
 cacctgccgg ggggacgcac ggcccgtggt tgcagtggaa gagcccggcg gccgcccgcg 300
 cagccttctc ggcccgcgcc cccgcgcgct gcacccccat ctgctcttcc ccgcgggggc 360
 cgcgcggcgc gggctggggg cccgggcagc cgcgctcggt cagcgggggc gcggggctgc 420
 cgctcgctgc cgcagctggt gccggtgcgc gcgctcggtc tgggccaccg ctccgacgag 480
 ctggtgcgtt tccgcttctg cagcggtctc tgccgcgcgc cgcgctctcc acacgacctc 540
 agcctggcca gcctactggg cgcgggggcc ctgcgaccgc ccccgggctc ccggcccgtc 600
 agccagccct gctgccgacc cagcgcttac gaagcgggtc ccttcatgga cgtcaacagc 660
 acctggagaa ccgtggaccg cctctccgcc accgcctgcg gctgcctggg ctga 714

<210> 31
 <211> 714
 <212> DNA
 <213> Homo sapiens

<400> 31
 tcagcccagg cagccgcagg cggtagcgga gaggcggtcc acggttctcc aggtgctgtt 60
 gacgtccatg aaggagaccg cttcgtagcg cgtgggtcgg cagcagggtt ggctgacggg 120
 ccgggagccc gggggcggtc gcagggcccc ggcgcccagt aggttgcca ggctgaggtc 180
 gtgtggagag cgcgcgcggc ggtaggagcc gctgcagaag cggaaacgca ccagctcgtc 240
 ggagcgggtg cccaggccga gcgcgcgcac cggcaccagc tgcgagcgca ggcggcagcc 300
 ccgcgcccc gctgcccagc cgcggctgcc cgggccccca gcccgcgccg cgcggcccc 360
 gcgggggaaga gcagatgggg gtgcaggcgg cgggggcgcg ggccgagaag gctgcggcgg 420
 cggccgcggg gctcttccac tgcaccagcg ggccgtgcgt ccccccggca ggtggccggc 480
 gggggacgcc aggacaggcg gggggccttc gcggggggca gggctgcggg gcgcggagcc 540
 cagggaggcc tctgcgacgc tgctcagcag agccagagcg gccagggtgg gccacagggc 600
 aggtgctgcg gagagaccaa gtggagcctc agggagaaaag agggcaccca ggtgggcttg 660
 gggaggaagg acctcaagga ggggctgtcc tcgggctgag atcaggcccg gcat 714

<210> 32
 <211> 237
 <212> PRT

<213> Homo sapiens

<400> 32

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Met Pro Gly Leu Ile Ser Ala Arg Gly Gln Pro Leu Leu Glu Val Leu
 1           5           10           15

Pro Pro Gln Ala His Leu Gly Ala Leu Phe Leu Pro Glu Ala Pro Leu
      20           25           30

Gly Leu Ser Ala Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala
      35           40           45

Leu Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser
 50           55           60

Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly
 65           70           75           80

His Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg
      85           90           95

Arg Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro
      100           105           110

Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly Gly Pro
      115           120           125

Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu Arg Ser
 130           135           140

Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser Asp Glu
 145           150           155           160

Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser
      165           170           175

Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg
      180           185           190

Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg Pro Thr
      195           200           205

Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr
      210           215           220

Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
 225           230           235

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<210> 33

<211> 96

<212> PRT

<213> MURINE

<400> 33

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Cys Arg Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly
 1           5           10           15

His Ser Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys
      20           25           30

Arg Arg Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu Leu Gly
      35           40           45

Ala Gly Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser Gln Pro
 50           55           60

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Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn
 65 70 75 80
 Ser Thr Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys Gly Cys
 85 90 95

<210> 34
 <211> 113
 <212> PRT
 <213> MURINE

<400> 34
 Ala Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala Arg Gly Cys
 1 5 10 15
 Arg Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly His
 20 25 30
 Ser Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg
 35 40 45
 Arg Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala
 50 55 60
 Gly Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser Gln Pro Cys
 65 70 75 80
 Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser
 85 90 95
 Thr Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys Gly Cys Leu
 100 105 110
 Gly

<210> 35
 <211> 116
 <212> PRT
 <213> MURINE

<400> 35
 Ala Ala Arg Ala Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala
 1 5 10 15
 Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly
 20 25 30
 Leu Gly His Ser Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly
 35 40 45
 Ser Cys Arg Arg Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu
 50 55 60
 Leu Gly Ala Gly Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser
 65 70 75 80
 Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp
 85 90 95

APR 11 2000

Val Asn Ser Thr Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys
 100 105 110

Gly Cys Leu Gly
 115

<210> 36
 <211> 144
 <212> PRT
 <213> MURINE

<400> 36
 Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro Pro Gly Pro Ala
 1 5 10 15

Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg Ala Ala Arg Ala
 20 25 30

Gly Thr Arg Ser Ser Arg Ala Arg Thr Thr Asp Ala Arg Gly Cys Arg
 35 40 45

Leu Arg Ser Gln Leu Val Pro Val Ser Ala Leu Gly Leu Gly His Ser
 50 55 60

Ser Asp Glu Leu Ile Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg
 65 70 75 80

Ala Arg Ser Gln His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly
 85 90 95

Ala Leu Arg Ser Pro Pro Gly Ser Arg Pro Ile Ser Gln Pro Cys Cys
 100 105 110

Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr
 115 120 125

Trp Arg Thr Val Asp His Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
 130 135 140

<210> 37
 <211> 342
 <212> DNA
 <213> MURINE

<400> 37
 gcaggaaccc ggagcagccg cgcacggacc acagatgcgc gcggtgccg cctgcgctcg 60
 cagctgggtgc cggtagtgct gctcggccta ggccacagct ccgacgagct gatacgtttc 120
 cgcttctgca gcggtcgtg ccgccgagca cgctcccagc acgatctcag tctggccagc 180
 ctactgggcg ctggggccct acggtcgcct cccgggtccc ggccgatcag ccagccctgc 240
 tgccggccca ctgcgtatga ggccgtctcc ttcattggacg tgaacagcac ctggaggacc 300
 gtggaccacc tctccgccac tgctcggcgc tgtctgggct ga 342

<210> 38
 <211> 351
 <212> DNA
 <213> MURINE

<400> 38
 gcggcgcgctg caggaacccg gagcagccgc gcacggacca cagatgcgcg cgggtgccgc 60
 ctgcgctcgc agctgggtgcc ggtgagtgctg ctcggcctag gccacagctc cgaacgagctg 120
 atacgtttcc gcttctgcag cggctcgtgc cgccgagcac gctcccagca cgatctcagt 180

ctggccagcc tactgggagc tggggcccta cggcgcctc ccgggtccc gccgatcagc 240
 cagccctgct gccggccac tcgctatgag gccgtctcct tcatggacgt gaacagcacc 300
 tggaggaccg tggaccacct ctccgccact gcctgcggct gtctgggctg a 351

<210> 39
 <211> 435
 <212> DNA
 <213> MURINE

<400> 39
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 cccgctgcgc tccgcggggc acgcgcggcg cgtgcaggaa cccggagcag ccgcgcacgg 120
 accacagatg cgcgcgggctg ccgcctgcgc tcgcagctgg tgccgggtgag tgcgctcggc 180
 ctaggccaca gctccgacga gctgatacgt ttccgcttct gcagcggctc gtgccgccga 240
 gcacgtcccc agcacgatct cagtctggcc agcctactgg gcgctggggc cctacggctc 300
 cctcccgggt cccggccgat cagccagccc tgctgccggc ccactcgcta tgaggccgctc 360
 tccttcatgg acgtgaacag cacctggagg accgtggacc acctctccgc cactgcctgc 420
 ggctgtctgg gctga 435

<210> 40
 <211> 181
 <212> PRT
 <213> Homo sapiens

<400> 40
 Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala Pro Arg Glu Gly Pro Pro
 1 5 10 15
 Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly Gly Arg Thr Ala
 20 25 30
 Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg
 35 40 45
 Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly
 50 55 60
 Arg Ala Ala Arg Ala Gly Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly
 65 70 75 80
 Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro Val Arg Ala Leu
 85 90 95
 Gly Leu Gly His Arg Ser Asp Glu Leu Val Arg Phe Arg Phe Cys Ser
 100 105 110
 Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp Leu Ser Leu Ala Ser
 115 120 125
 Leu Leu Gly Ala Gly Ala Leu Arg Pro Pro Pro Gly Ser Arg Pro Val
 130 135 140
 Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala Val Ser Phe Met
 145 150 155 160
 Asp Val Asn Ser Thr Trp Arg Thr Val Asp Arg Leu Ser Ala Thr Ala
 165 170 175
 Cys Gly Cys Leu Gly
 180

<210> 41
 <211> 185
 <212> PRT
 <213> MURINE

<400> 41

Ser Leu Asp Pro Met Ser Arg Ser Pro Ala Ala Arg Asp Gly Pro Ser
 1 5 10 15
 Pro Val Leu Ala Pro Pro Thr Asp His Leu Pro Gly Gly His Thr Ala
 20 25 30
 His Leu Cys Ser Glu Arg Thr Leu Arg Pro Pro Pro Gln Ser Pro Gln
 35 40 45
 Pro Ala Pro Pro Pro Pro Gly Pro Ala Leu Gln Ser Pro Pro Ala Ala
 50 55 60
 Leu Arg Gly Ala Arg Ala Ala Arg Ala Gly Thr Arg Ser Ser Arg Ala
 65 70 75 80
 Arg Thr Thr Asp Ala Arg Gly Cys Arg Leu Arg Ser Gln Leu Val Pro
 85 90 95
 Val Ser Ala Leu Gly Leu Gly His Ser Ser Asp Glu Leu Ile Arg Phe
 100 105 110
 Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Gln His Asp Leu
 115 120 125
 Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Ser Pro Pro Gly
 130 135 140
 Ser Arg Pro Ile Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu Ala
 145 150 155 160
 Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp His Leu
 165 170 175
 Ser Ala Thr Ala Cys Gly Cys Leu Gly
 180 185

<210> 42

<211> 546

<212> DNA

<213> Homo sapiens

<400> 42

tccctgggct ccgcgccccg cagccctgcc ccccgcgag gccccccgcc tgcctggcg 60
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 cggcgcgcgc cgcagccttc tcggcccgcg ccccgccgc ctgcaccccc atctgctctt 180
 ccccgcgggg gccgcgcggc gcgggctggg ggccccggca gccgcgctcg ggcagcgggg 240
 gcgcggggct gccgcctgcg ctgcagctg gtgcgggtgc gcgcgctcg cctgggccac 300
 cgctccgacg agctgggtgc tttccgcttc tgcagcggct cctgccgcgc cgcgcgctct 360
 ccacacgacc tcagcctggc cagcctaact ggcccgggg ccctgcgacc gccccgggc 420
 tcccgccccg tcagccagcc ctgctgccga cccacgcgct acgaagcggc ctccttcatt 480
 gacgtcaaca gcacctggag aaccgtggac cgcctctccg ccaccgcctg cggctgcctg 540
 ggctga 546

<210> 43

<211> 558

<212> DNA

<213> MURINE

<400> 43

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 cccccacgg accacctgcc tgggggacac actgcgatt tgtgcagcga aagaaccttg 120
 cgacccccgc ctacgtctcc tcagccccga ccccgccgc ctggtcccgc gctccagtct 180
 cctcccgctg cgctccgcgg ggcacgcgcg gcgcgtgcag gaaccggag cagccgcgca 240


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cggaccacag atgcgcgcgg ctgccgcctg cgctcgcagc tggtgccggt gagtgcgctc 300
ggcctaggcc acagctccga cgagctgata cgtttccgct tctgcagcgg ctcgtgccgc 360
cgagcacgct cccagcacga tctcagtctg gccagcctac tgggcgctgg ggccctacgg 420
tcgcctcccg ggtcccggcc gatcagccag ccctgctgcc ggcccactcg ctatgaggcc 480
gtctccttca tggacgtgaa cagcacctgg aggaccgtgg accacctctc cgccactgcc 540
tgcggtgtgc tgggctga                                     558

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<210> 44
<211> 663
<212> DNA
<213> Homo sapiens

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<400> 44
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cctgccctgt ggcccaccct ggccgctctg gctctgctga gcagcgctgc agaggcctcc 120
ctgggctccg cgcccgcag ccctgcccc cgcgaaggcc cccgcctgt cctggcgctcc 180
cccgcgggcc acctgccggg gggacgcacg gcccgctggt gcagtggaag agcccggcg 240
ccgcgcgcgc agccttctcg gcccgcccc ccgcgcctg ccccccatc tgctcttccc 300
cgcgggggcc gcgcggcgcg ggctgggggc ccgggcagcc gcgctcgggc agcgggggcg 360
cggggctgcc gcctgcgctc gcagctggtg ccggtgcgcg cgctcggcct gggccaccgc 420
tccgacgagc tggtgcgttt ccgcttctgc agcggtcct gccgcgcgc gcgctctcca 480
cacgacctca gcctggccag cctactgggc gccggggccc tgcgaccgcc ccggggctcc 540
cggcccgctc gccagccctg ctgccgacct acgcgctacg aggcggtctc cttcatggac 600
gtcaacagca cctggagAAC cgtggaccgc ctctccgcca ccgcctgcgg ctgcctgggc 660
tga                                                         663

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<210> 45
<400> 45
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<210> 46
<400> 46
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<210> 47
<400> 47
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<210> 48
<211> 39
<212> PRT
<213> Homo sapiens

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<400> 48
Met Glu Leu Gly Leu Gly Gly Leu Ser Thr Leu Ser His Cys Pro Trp
  1           5           10           15
Pro Arg Arg Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu
          20           25           30
Leu Ser Ser Val Ala Glu Ala
          35

```

```

<210> 49
<211> 39
<212> PRT
<213> MURINE

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<400> 49
Met Glu Leu Gly Leu Ala Glu Pro Thr Ala Leu Ser His Cys Leu Arg
  1           5           10           15
Pro Arg Trp Gln Ser Ala Trp Trp Pro Thr Leu Ala Val Leu Ala Leu
          20           25           30

```

Leu Ser Cys Val Thr Glu Ala
35

<210> 50
<211> 68
<212> PRT
<213> Homo sapiens

<400> 50
Ser Leu Gly Ser Ala Pro Arg Ser Pro Ala Pro Arg Glu Gly Pro Pro
1 5 10 15
Pro Val Leu Ala Ser Pro Ala Gly His Leu Pro Gly Gly Arg Thr Ala
20 25 30
Arg Trp Cys Ser Gly Arg Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg
35 40 45
Pro Ala Pro Pro Pro Pro Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly
50 55 60
Arg Ala Ala Arg
65

<210> 51
<211> 72
<212> PRT
<213> MURINE

<400> 51
Ser Leu Asp Pro Met Ser Arg Ser Pro Ala Ala Arg Asp Gly Pro Ser
1 5 10 15
Pro Val Leu Ala Pro Pro Thr Asp His Leu Pro Gly Gly His Thr Ala
20 25 30
His Leu Cys Ser Glu Arg Thr Leu Arg Pro Pro Pro Gln Ser Pro Gln
35 40 45
Pro Ala Pro Pro Pro Pro Gly Pro Ala Leu Gln Ser Pro Pro Ala Ala
50 55 60
Leu Arg Gly Ala Arg Ala Arg
65 70

<210> 52
<211> 107
<212> PRT
<213> Homo sapiens

<400> 52
Met Glu Leu Gly Leu Gly Gly Leu Ser Thr Leu Ser His Cys Pro Trp
1 5 10 15
Pro Arg Arg Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala Leu Ala Leu
20 25 30
Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro Arg Ser Pro
35 40 45
Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro Ala Gly His
50 55 60

Leu Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg Ala Arg Arg
65 70 75 80

Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro Pro Ala Pro Pro
85 90 95

Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg
100 105

<210> 53
<211> 111
<212> PRT
<213> MURINE

<400> 53
Met Glu Leu Gly Leu Ala Glu Pro Thr Ala Leu Ser His Cys Leu Arg
1 5 10 15

Pro Arg Trp Gln Ser Ala Trp Trp Pro Thr Leu Ala Val Leu Ala Leu
20 25 30

Leu Ser Cys Val Thr Glu Ala Ser Leu Asp Pro Met Ser Arg Ser Pro
35 40 45

Ala Ala Arg Asp Gly Pro Ser Pro Val Leu Ala Pro Pro Thr Asp His
50 55 60

Leu Pro Gly Gly His Thr Ala His Leu Cys Ser Glu Arg Thr Leu Arg
65 70 75 80

Pro Pro Pro Gln Ser Pro Gln Pro Ala Pro Pro Pro Pro Gly Pro Ala
85 90 95

Leu Gln Ser Pro Pro Ala Ala Leu Arg Gly Ala Arg Ala Ala Arg
100 105 110

<210> 54
<211> 117
<212> DNA
<213> Homo sapiens

<400> 54
atggaacttg gacttggagg cctctccacg ctgtcccact gcccctggcc taggcggcag 60
cctgcctgt ggcccacct ggccgctctg gctctgctga gcagcgtcgc agaggcc 117

<210> 55
<211> 117
<212> DNA
<213> MURINE

<400> 55
atggaactgg gacttgcaga gcctactgca ttgtcccact gcctccggcc taggtggcag 60
tcagcctggt ggccaacct agctgttcta gccctgctga gctgcgtcac agaagct 117

<210> 56
<211> 204
<212> DNA
<213> Homo sapiens

<400> 56
tccttgggct ccgcgccccg cagccctgcc ccccggaag gcccccgcc tgtcctggcg 60
tccccgcgc gccacctgcc ggggggacgc acggcccgct ggtgcagtgg aagagcccg 120
cggcgcgcgc cgcagccttc tcggccccgc cccccgcgc ctgcaccccc atctgtctt 180
ccccgcggg gccgcgcgc gcgg 204

<210> 57
 <211> 216
 <212> DNA
 <213> MURINE

<400> 57
 tccctggacc caatgtcccg cagccccgcc gctcgcgacg gtccctcacc ggtcttggcg 60
 cccccacgg accacctgcc tgggggacac actgcgcat tgtgcagcga aagaaccctg 120
 cgacccccgc ctacgtctcc tcagcccgca cccccgccg ctgggtcccg gctccagtct 180
 cctcccgtg cgctccgcgg ggcacgcgcg gcgcgt 216

<210> 58
 <211> 321
 <212> DNA
 <213> Homo sapiens

<400> 58
 atggaacttg gacttggagg cctctccacg ctgtccact gcccctggcc tagggcgag 60
 cctgccctgt ggcccaccct ggccgctctg gctctgctga gcagcgtcgc agaggcctcc 120
 ctgggtcccg cgcccccgag cctgcccc cgcgaaggcc ccccgctgt cctggcgtcc 180
 cccgcccggc acctgccggg gggacgcag gcccgctggt gcagtggag agccccggcg 240
 ccgcccgcgc agccttctcg gcccgcgccc ccgcccgtg caccctcctc tgctcttccc 300
 cgcgggggcc gcgcggcgcg g 321

<210> 59
 <211> 333
 <212> DNA
 <213> MURINE

<400> 59
 gcaggaaccc ggagcagccg cgcacggacc acagatgcgc gcggctgccg cctgcgctcg 60
 cagctggtgc cggtagtgc gctcggccta ggccacagct ccgacgagct gatacgtttc 120
 cgcttctgca gcggctcgtg ccgcccagca cgctcccagc acgatctcag tctggccagc 180
 ctactggcg ctggggccct acggctcgct cccgggtccc ggccgatcag ccagccctgc 240
 tgccggccca ctcgctatga ggccgtctcc ttcatggagc tgaacagcac ctggaggacc 300
 gtggaccacc tctccgccac tgcccgcgcg tgt 333

<210> 60
 <211> 342
 <212> DNA
 <213> MURINE

<400> 60
 tcagcccaga cagccgcagg cagtggcgga gaggtggtcc acggctcctcc aggtgctggt 60
 caggtccatg aaggagacgg cctcatagcg agtgggcccg cagcagggct ggctgatcgg 120
 ccgggacccg ggaggcgacc gtagggcccc agcggcccagt aggtgggcca gactgagatc 180
 gtgctgggag cgtgctcgcc ggcacgagcc gctgcagaag cggaacgta tcagctcgtc 240
 ggagctgtgg cctaggccga gcgcactcac cggcaccagc tgcgagcgca ggcggcagcc 300
 gcgcgcactc gtgggtccgtg cgcggctgct ccgggttcct gc 342

<210> 61
 <211> 351
 <212> DNA
 <213> MURINE

<400> 61
 tcagcccaga cagccgcagg cagtggcgga gaggtggtcc acggctcctcc aggtgctggt 60
 caggtccatg aaggagacgg cctcatagcg agtgggcccg cagcagggct ggctgatcgg 120
 ccgggacccg ggaggcgacc gtagggcccc agcggcccagt aggtgggcca gactgagatc 180
 gtgctgggag cgtgctcgcc ggcacgagcc gctgcagaag cggaacgta tcagctcgtc 240
 ggagctgtgg cctaggccga gcgcactcac cggcaccagc tgcgagcgca ggcggcagcc 300
 gcgcgcactc gtgggtccgtg cgcggctgct ccgggttcct gcacgcgccg c 351

<210> 62
 <211> 435

<212> DNA
 <213> MURINE

<400> 62
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 cacgtccatg aaggagacgg cctcatagcg agtgggcccg cagcagggct ggctgatcgg 120
 ccgggacccg ggaggcgacc gtagggcccc agcgcccagt aggtggcca gactgagatc 180
 gtgctgggag cgtgctcggc ggcacgagcc gctgcagaag cggaaacgta tcagctcgtc 240
 ggagctgtgg cctaggccga gcgcactcac cggcaccagc tgcgagcgca ggcggcagcc 300
 gcgcgcatct gtggtccgtg cgcggctgct ccgggttcct gcacgcgccg cgcgtgcccc 360
 gcggagcgca gcgggaggag actggagcgc gggaccaggc ggcgggggtg cgggctgagg 420
 agactgaggc gggggg 435

<210> 63
 <211> 400
 <212> PRT
 <213> Homo sapiens

<400> 63
 Met Val Arg Pro Leu Asn Pro Arg Pro Leu Pro Pro Val Val Leu Met
 1 5 10 15
 Leu Leu Leu Leu Leu Pro Pro Ser Pro Leu Pro Leu Ala Ala Gly Asp
 20 25 30
 Pro Leu Pro Thr Glu Ser Arg Leu Met Asn Ser Cys Leu Gln Ala Arg
 35 40 45
 Arg Lys Cys Gln Ala Asp Pro Thr Cys Ser Ala Ala Tyr His His Leu
 50 55 60
 Asp Ser Cys Thr Ser Ser Ile Ser Thr Pro Leu Pro Ser Glu Glu Pro
 65 70 75 80
 Ser Val Pro Ala Asp Cys Leu Glu Ala Ala Gln Gln Leu Arg Asn Ser
 85 90 95
 Ser Leu Ile Gly Cys Met Cys His Arg Arg Met Lys Asn Gln Val Ala
 100 105 110
 Cys Leu Asp Ile Tyr Trp Thr Val His Arg Ala Arg Ser Leu Gly Asn
 115 120 125
 Tyr Glu Leu Asp Val Ser Pro Tyr Glu Asp Thr Val Thr Ser Lys Pro
 130 135 140
 Trp Lys Met Asn Leu Ser Lys Leu Asn Met Leu Lys Pro Asp Ser Asp
 145 150 155 160
 Leu Cys Leu Lys Phe Ala Met Leu Cys Thr Leu Asn Asp Lys Cys Asp
 165 170 175
 Arg Leu Arg Lys Ala Tyr Gly Glu Ala Cys Ser Gly Pro His Cys Gln
 180 185 190
 Arg His Val Cys Leu Arg Gln Leu Leu Thr Phe Phe Glu Lys Ala Ala
 195 200 205
 Glu Pro His Ala Gln Gly Leu Leu Leu Cys Pro Cys Ala Pro Asn Asp
 210 215 220
 Arg Gly Cys Gly Glu Arg Arg Arg Asn Thr Ile Ala Pro Asn Cys Ala
 225 230 235 240
 Leu Pro Pro Val Ala Pro Asn Cys Leu Glu Leu Arg Arg Leu Cys Phe
 245 250 255

Ser Asp Pro Leu Cys Arg Ser Arg Leu Val Asp Phe Gln Thr His Cys
 260 265 270
 His Pro Met Asp Ile Leu Gly Thr Cys Ala Thr Glu Gln Ser Arg Cys
 275 280 285
 Leu Arg Ala Tyr Leu Gly Leu Ile Gly Thr Ala Met Thr Pro Asn Phe
 290 295 300
 Val Ser Asn Val Asn Thr Ser Val Ala Leu Ser Cys Thr Cys Arg Gly
 305 310 315 320
 Ser Gly Asn Leu Gln Glu Glu Cys Glu Met Leu Glu Gly Phe Phe Ser
 325 330 335
 His Asn Pro Cys Leu Thr Glu Ala Ile Ala Ala Lys Met Arg Phe His
 340 345 350
 Ser Gln Leu Phe Ser Gln Asp Trp Pro His Pro Thr Phe Ala Val Met
 355 360 365
 Ala His Gln Asn Glu Asn Pro Ala Val Arg Pro Gln Pro Trp Val Pro
 370 375 380
 Ser Leu Phe Ser Cys Thr Leu Pro Leu Ile Leu Leu Leu Ser Leu Trp
 385 390 395 400

<210> 64
 <211> 397
 <212> PRT
 <213> Murine

<400> 64
 Met Gly Leu Ser Trp Ser Pro Arg Pro Pro Leu Leu Met Ile Leu Leu
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 Leu Val Leu Ser Leu Trp Leu Pro Leu Gly Ala Gly Asn Ser Leu Ala
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 Thr Glu Asn Arg Phe Val Asn Ser Cys Thr Gln Ala Arg Lys Lys Cys
 35 40 45
 Glu Ala Asn Pro Ala Cys Lys Ala Ala Tyr Gln His Leu Gly Ser Cys
 50 55 60
 Thr Ser Ser Leu Ser Arg Pro Leu Pro Leu Glu Glu Ser Ala Met Ser
 65 70 75 80
 Ala Asp Cys Leu Glu Ala Ala Glu Gln Leu Arg Asn Ser Ser Leu Ile
 85 90 95
 Asp Cys Arg Cys His Arg Arg Met Lys His Gln Ala Thr Cys Leu Asp
 100 105 110
 Ile Tyr Trp Thr Val His Pro Ala Arg Ser Leu Gly Asp Tyr Glu Leu
 115 120 125
 Asp Val Ser Pro Tyr Glu Asp Thr Val Thr Ser Lys Pro Trp Lys Met
 130 135 140

Asn Leu Ser Lys Leu Asn Met Leu Lys Pro Asp Ser Asp Leu Cys Leu
 145 150 155 160
 Lys Phe Ala Met Leu Cys Thr Leu His Asp Lys Cys Asp Arg Leu Arg
 165 170 175
 Lys Ala Tyr Gly Glu Ala Cys Ser Gly Ile Arg Cys Gln Arg His Leu
 180 185 190
 Cys Leu Ala Gln Leu Arg Ser Phe Phe Glu Lys Ala Ala Glu Ser His
 195 200 205
 Ala Gln Gly Leu Leu Leu Cys Pro Cys Ala Pro Glu Asp Ala Gly Cys
 210 215 220
 Gly Glu Arg Arg Arg Asn Thr Ile Ala Pro Ser Cys Ala Leu Pro Ser
 225 230 235 240
 Val Thr Pro Asn Cys Leu Asp Leu Arg Ser Phe Cys Arg Ala Asp Pro
 245 250 255
 Leu Cys Arg Ser Arg Leu Met Asp Phe Gln Thr His Cys His Pro Met
 260 265 270
 Asp Ile Leu Gly Thr Cys Ala Thr Glu Gln Ser Arg Cys Leu Arg Ala
 275 280 285
 Tyr Leu Gly Leu Ile Gly Thr Ala Met Thr Pro Asn Phe Ile Ser Lys
 290 295 300
 Val Asn Thr Thr Val Ala Leu Ser Cys Thr Cys Arg Gly Ser Gly Asn
 305 310 315 320
 Leu Gln Asp Glu Cys Glu Gln Leu Glu Arg Ser Phe Ser Gln Asn Pro
 325 330 335
 Cys Leu Val Glu Ala Ile Ala Ala Lys Met Arg Phe His Arg Gln Leu
 340 345 350
 Phe Ser Gln Asp Trp Ala Asp Ser Thr Phe Ser Val Val Gln Gln Gln
 355 360 365
 Asn Ser Asn Pro Ala Leu Arg Leu Gln Pro Arg Leu Pro Ile Leu Ser
 370 375 380
 Phe Ser Ile Leu Pro Leu Ile Leu Leu Gln Thr Leu Trp
 385 390 395

<210> 65

<211> 1203

<212> DNA

<213> Homo sapiens

<400> 65

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 atgaacagct gtctccaggc caggaggaag tgccaggctg atcccacctg cagtgcctgc 180
 taccaccacc tggattcctg cacctctagc ataagcacc cactgccctc agaggagcct 240
 tcggtccctg ctgactgcct ggaggcagca cagcaactca ggaacagctc tctgataggc 300
 tgcatgtgcc accggcgcat gaagaaccag gttgcctgct tggacatcta ttggaccgtt 360
 caccgtgccc gcagccttg taactatgag ctggatgtct cccctatga agacacagtg 420
 accagcaaac cctggaaaat gaatctcagc aaactgaaca tgctcaaacc agactcagac 480
 ctctgcctca agtttgccat gctgtgtact ctcaatgaca agtgtgaccg gctgcgcaag 540
 gcctacgggg aggcgtgctc cgggccccac tgccagcgcc acgtctgcct caggcagctg 600
 ctcactttct tcgagaaggc cgccgagccc cagcgcgagg gcctgctact gtgccatgt 660

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gcccccaacg accggggctg cggggagcgc cggcgcaaca ccatcgcccc caactgcgcg 720
ctgccgcctg tggcccccaa ctgcctggag ctgcggcgcc tctgcttctc cgaccgcgtt 780
tgcagatcac gcctgggtgga tttccagacc cactgccatc ccatggacat cctaggaact 840
tgtgcaacag agcagtccag atgtctacga gcatacctgg ggctgattgg gactgccatg 900
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agtggcaacc tgcaggagga gtgtgaaatg ctggaagggt tcttctccca caaccctgc 1020
ctcacggagg ccattgcagc taagatgcgt ttccacagcc aactcttctc ccaggactgg 1080
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tag 1203

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<210> 66
 <211> 24
 <212> DNA
 <213> RAT

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<400> 66
tcgcgacggg ggctcaccgg tctt 24

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<210> 67
 <211> 24
 <212> DNA
 <213> RAT

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<400> 67
gcacgagccg ctgcagaagc ggaa 24

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<210> 68
 <211> 1652
 <212> DNA
 <213> Homo sapiens

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<400> 68
ctctgagctt ctctgagcct tgtttgctca tctggaaaaa ggggattaaa ccatttacct 60
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ctacttctgc tgggttgagt ctagctgtgt agggcccttg ttcctcacct ggagaaactg 180
gggtggcagg ccggtccccc acaaaagata actcatctct taatttgcaa gctgcctcaa 240
caggagggtg ggggaacagc tcaacaatgg ctgatgggcg ctctgggtgt tgatagagat 300
ggaacttgga cttggaggcc tctccacgct gtcccactgc ccctggccta ggcggcaggt 360
gagtgttctt cccagtgact cctacctggt actgaggaaa ggcggcttga ctggtgaggg 420
agagcagggc ttggcttggg cagcggttag gtgtgggagg gaaaatgggtc agggaggggac 480
caggatgaatg ggaggaggag cgggacttct ctgaatgggtc ggtgcactca ggtgattcct 540
cccctgggct cccagaggca gcaaaccat tatactggaa cctaggccct tcctgagttt 600
cccctccaca cagctaggag cccatgcccc gcctgatctc agcccgagga cagccccctc 660
ttgaggtcct tctccccc aa gcccacctgg gtgccctctt tctccctgag gctccacttg 720
gtctctccgc gcagcctgcc ctgtggccca ccctggccgc tctggctctg ctgagcagcg 780
tcgcagaggc ctccctgggc tccgcgcccc gcagccctgc cccccgcgaa ggccccccgc 840
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tggtgcagtg gaagagcccc gcggccgccc ccgcagcctt ctcgcccgcc gcccccgcg 1020
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tctgcccgc gcgcgcgctc tccacacgac ctacgcctgg ccagcctact gggcgccggg 1260
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ccagggacga aggcctcaaa gctgagaggc ccctgccggt gggtagtgga tatcatcccc 1560
gaacagggtg agggacaact gactagcagc cccagagccc tcaccctgcg gatcccagcc 1620
taaaagacac cagagacctc agctatggag cc 1652

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<210> 69
 <211> 1652
 <212> DNA
 <213> MURINE

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 ctgttgacgt ccatgaagga gaccgcttcg tagcgcgtgg gtcggcagca gggctggctg 360
 acgggcccggg agcccggggg cggtcgcagg gccccggcgc ccagtaggct ggcaggctg 420
 aggtcgtgtg gagagcgcgc gcggcggcag gagccgctgc agaagcggaa acgcaccagc 480
 tcgtcggagc ggtggcccag gccgagcgcg cgcaccggca ccagctgcga gcgcaggcgg 540
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 ggccggcggcc gccgggctct tccactgcac cagcgggccc tgcgtcccc tggaaatgaga 720
 cccagtcacg cgcggtgtcc cgggccagcc ccgccccgcc cctcgcctt ctcacctacc 780
 cggcaggtgg ccggcggggg acgccaggac aggcgggggg ccttcgcggg gggcagggt 840
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 gccgggcatg ggctcctagc tgtgtggagg ggaaactcag gaagggccta ggttccagta 1080
 taatgggttt gctgcctctg ggagcccagg ggaggaatca cctgagtgcg ccgaccattc 1140
 agagaagtcc cgctcctcct ccatttcacc tggtcctcct ctgaccattt tccctcccac 1200
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 gttatctttt gtgggggacc ggccctgccac cccagtttct ccagggtgag aacaaggggc 1500
 ctacacagct agactcaacc cagcagaagt agctgcactg ggaaccttac tatgtgttag 1560
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 gatgagcaaa caaggctcag agaagctcag ag 1652

<210> 70
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 70
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 1 5 10 15
 Leu Pro His Gly Val Val Lys Glu
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<210> 71
 <211> 4
 <212> PRT
 <213> Homo sapiens

<400> 71
 Leu Gln Ser Thr
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<210> 72
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 72
 His Ile Val Arg Phe Pro Val Gln Leu Leu Leu Gly
 1 5 10

<210> 73
 <211> 488

<212> DNA
<213> RAT

<400> 73

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agcggttcgt gccgccgagc acgctccccg cagcatctca gcctggccag cctgctgggc 120
gccggggccc tgcggtcgcc tcccgggtcc cggccgatca gccagccctg ttgccggccc 180
actcgctatg aggccgtctc cttcatggat gtgaacagca cctggagaac cgtggaccat 240
ctctccgcca ccgcctgcgg ctgtctgggc tgaggatgat cttcaagctt ttgcacactg 300
gacccatatt tgcgccctacc tggaacagcc ccacggggcc tctactagcta ggagcctcaa 360
ctcaacagga agctcaggcc tcaggccgat gagggacaga cagagcctgg aaagatgacc 420
gaaccactga ccaacagtcc caaggtgttc atggatccca gctctacaga cagcagaaac 480
ctcagcta                                     488
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<210> 74
<211> 488
<212> DNA
<213> RAT

<400> 74

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ctgttgagtt gaggtccta gctagttagg ccccggtggg ctgttccagg tagggcgaca 180
tatgggtcca gtgtgcaaaa gcttgaagat catcctcagc ccagacagcc gcaggcggtg 240
gcggagagat ggtccacggt tctccagggt ctgttcacat ccatgaagga gacggcctca 300
tagcgagtgg gccggcaaca gggctggctg atcggccggg acccgggagg cgaccgcagg 360
gccccggcgc ccagcaggct ggccaggctg agatcgtgcg gggagcgtgc tcggcggcac 420
gaaccgctgc agaagcgaa acgtatcagc tcgtcggagc tgtggcccag gccgagagcg 480
ctcaccgg                                     488
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<210> 75
<211> 90
<212> PRT
<213> RAT

<400> 75

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Pro Val Ser Ala Leu Gly Leu Gly His Ser Ser Asp Glu Leu Ile Arg
  1             5             10             15

Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala Arg Ser Pro His Asp
          20             25             30

Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala Leu Arg Ser Pro Pro
      35             40             45

Gly Ser Arg Pro Ile Ser Gln Pro Cys Cys Arg Pro Thr Arg Tyr Glu
  50             55             60

Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp Arg Thr Val Asp His
  65             70             75             80

Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
          85             90
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<210> 76
<211> 20
<212> DNA
<213> RAT

<400> 76

ccggtgagcg ctctcggcct

20

<210> 77
<211> 24
<212> DNA

<213> RAT

<400> 77

ttctggattc tcccagagga gttc

24

<210> 78

<211> 6

<212> PRT

<213> Homo sapiens

<400> 78

Trp Pro Leu Trp Leu Cys

1 5

<210> 79

<211> 50

<212> PRT

<213> Homo sapiens

<400> 79

Ala Ala Ser Gln Arg Pro Pro Trp Ala Pro Arg Pro Ala Ala Leu Pro
1 5 10 15

Pro Ala Lys Ala Pro Arg Leu Ser Trp Arg Pro Pro Pro Ala Thr Cys
20 25 30

Arg Val Gly Glu Arg Ala Arg Gly Arg Gly Gly Ala Gly Pro Gly His
35 40 45

Arg Ala
50

<210> 80

<211> 14

<212> PRT

<213> Homo sapiens

<400> 80

Gly Leu Ala Pro Gly Leu Cys Arg Leu Asp Pro Tyr Arg Trp
1 5 10

<210> 81

<211> 68

<212> PRT

<213> Homo sapiens

<400> 81

Leu Cys Arg Pro Leu Val Pro His Leu Glu Lys Leu Gly Trp Gln Ala
1 5 10 15

Gly Pro Pro Gln Lys Ile Thr His Leu Leu Ile Cys Lys Leu Pro Gln
20 25 30

Gln Glu Gly Gly Gly Thr Ala Gln Gln Trp Leu Met Gly Ala Pro Gly
35 40 45

Val Asp Arg Asp Gly Thr Trp Thr Trp Arg Pro Leu His Ala Val Pro
50 55 60

Leu Pro Leu Ala
65

<210> 82
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 82
 Ala Ala Gly Glu Trp Phe Ser Gln
 1 5

<210> 83
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 83
 Leu Leu Pro Gly Thr Glu Glu Arg Arg Leu Asp Trp
 1 5 10

<210> 84
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 84
 Gly Arg Ala Gly Leu Gly Leu Gly Ser Gly
 1 5 10

<210> 85
 <211> 44
 <212> PRT
 <213> Homo sapiens

<400> 85
 Val Trp Glu Gly Lys Trp Ser Gly Arg Asp Gln Val Asn Gly Arg Arg
 1 5 10 15

Ser Gly Thr Ser Leu Asn Gly Arg Cys Thr Gln Val Ile Pro Pro Leu
 20 25 30

Gly Ser Gln Arg Gln Gln Thr His Tyr Thr Gly Thr
 35 40

<210> 86
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 86
 Ala Leu Pro Glu Phe Pro Leu His Thr Ala Arg Ser Pro Cys Pro Ala
 1 5 10 15

<210> 87
 <211> 45
 <212> PRT
 <213> Homo sapiens

<400> 87
 Ser Gln Pro Glu Asp Ser Pro Ser Leu Arg Ser Phe Leu Pro Lys Pro
 1 5 10 15

Thr Trp Val Pro Ser Phe Ser Leu Arg Leu His Leu Val Ser Pro Arg
 20 25 30

Ser Leu Pro Cys Gly Pro Pro Trp Pro Leu Trp Leu Cys
 35 40 45

<210> 88
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 88
 Ala Ala Ser Gln Arg Pro Pro Trp Ala Pro Arg Pro Ala Ala Leu Pro
 1 5 10 15

Pro Ala Lys Ala Pro Arg Leu Ser Trp Arg Pro Pro Pro Ala Thr Cys
 20 25 30

Arg Val Gly Glu Arg Ala Arg Gly Arg Gly Gly Ala Gly Pro Gly His
 35 40 45

Arg Ala
 50

<210> 89
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 89
 Leu Gly Leu Ile Pro Gly Gly Arg Thr Ala Arg Trp Cys Ser Gly Arg
 1 5 10 15

Ala Arg Arg Pro Pro Pro Gln Pro Ser Arg Pro Ala Pro Pro Pro
 20 25 30

Ala Pro Pro Ser Ala Leu Pro Arg Gly Gly Arg Ala Ala Arg Ala Gly
 35 40 45

Gly Pro Gly Ser Arg Ala Arg Ala Ala Gly Ala Arg Gly Cys Arg Leu
 50 55 60

Arg Ser Gln Leu Val Pro Val Arg Ala Leu Gly Leu Gly His Arg Ser
 65 70 75 80

Asp Glu Leu Val Arg Phe Arg Phe Cys Ser Gly Ser Cys Arg Arg Ala
 85 90 95

Arg Ser Pro His Asp Leu Ser Leu Ala Ser Leu Leu Gly Ala Gly Ala
 100 105 110

Leu Arg Pro Pro Pro Gly Ser Arg Pro Val Ser Gln Pro Cys Cys Arg
 115 120 125

Pro Thr Arg Tyr Glu Ala Val Ser Phe Met Asp Val Asn Ser Thr Trp
 130 135 140

Arg Thr Val Asp Arg Leu Ser Ala Thr Ala Cys Gly Cys Leu Gly
 145 150 155

<210> 90
 <211> 71
 <212> PRT

<213> Homo sapiens

<400> 90

Gly Leu Ala Pro Gly Leu Cys Arg Leu Asp Pro Tyr Arg Trp Leu Phe
1 5 10 15

Leu Pro Gly Thr Leu Pro Gln Ser Pro Thr Ser Gln Arg Pro Gln Pro
20 25 30

Gly Thr Lys Ala Ser Lys Leu Arg Gly Pro Cys Arg Trp Val Met Asp
35 40 45

Ile Ile Pro Glu Gln Val Lys Gly Gln Leu Thr Ser Ser Pro Arg Ala
50 55 60

Leu Thr Leu Arg Ile Pro Ala
65 70

<210> 91

<211> 10

<212> PRT

<213> Homo sapiens

<400> 91

Lys Thr Pro Glu Thr Ser Ala Met Glu Pro
1 5 10

<210> 92

<211> 4

<212> PRT

<213> Homo sapiens

<400> 92

Ser Glu Leu Leu
1

<210> 93

<211> 10

<212> PRT

<213> Homo sapiens

<400> 93

Ala Leu Phe Ala His Leu Glu Lys Gly Asp
1 5 10

<210> 94

<211> 7

<212> PRT

<213> Homo sapiens

<400> 94

Thr Ile Tyr Leu Met Glu Leu
1 5

<210> 95

<211> 9

<212> PRT

<213> Homo sapiens

<400> 95

Lys Asn Ser Cys Lys Ala Pro Asn Thr
1 5

<210> 96

<211> 34

<212> PRT

<213> Homo sapiens

<400> 96

Gly Ser Gln Cys Ser Tyr Phe Cys Trp Val Glu Ser Ser Cys Val Gly
1 5 10 15Pro Leu Phe Leu Thr Trp Arg Asn Trp Gly Gly Arg Pro Val Pro His
20 25 30

Lys Arg

<210> 97

<211> 16

<212> PRT

<213> Homo sapiens

<400> 97

Phe Ala Ser Cys Leu Asn Arg Arg Val Gly Glu Gln Leu Asn Asn Gly
1 5 10 15

<210> 98

<211> 70

<212> PRT

<213> Homo sapiens

<400> 98

Trp Ala Leu Leu Val Leu Ile Glu Met Glu Leu Gly Leu Gly Gly Leu
1 5 10 15Ser Thr Leu Ser His Cys Pro Trp Pro Arg Arg Gln Val Ser Gly Ser
20 25 30Pro Ser Asp Ser Tyr Leu Val Leu Arg Lys Gly Gly Leu Thr Gly Glu
35 40 45Gly Glu Gln Gly Leu Ala Trp Ala Ala Val Arg Cys Gly Arg Glu Asn
50 55 60Gly Gln Gly Gly Thr Arg
65 70

<210> 99

<211> 8

<212> PRT

<213> Homo sapiens

<400> 99

Met Gly Gly Gly Ala Gly Leu Leu
1 5

<210> 100

<211> 6

<212> PRT

<213> Homo sapiens

<400> 100

Met Val Gly Ala Leu Arg
1 5

<210> 101

<211> 42

<212> PRT

<213> Homo sapiens

<400> 101

Phe Leu Pro Trp Ala Pro Arg Gly Ser Lys Pro Ile Ile Leu Glu Pro
1 5 10 15

Arg Pro Phe Leu Ser Phe Pro Ser Thr Gln Leu Gly Ala His Ala Arg
20 25 30

Pro Asp Leu Ser Pro Arg Thr Ala Pro Pro
35 40

<210> 102

<211> 14

<212> PRT

<213> Homo sapiens

<400> 102

Gly Pro Ser Ser Pro Ser Pro Pro Gly Cys Pro Leu Ser Pro
1 5 10

<210> 103

<211> 55

<212> PRT

<213> Homo sapiens

<400> 103

Gly Ser Thr Trp Ser Leu Arg Ala Ala Cys Pro Val Ala His Pro Gly
1 5 10 15

Arg Ser Gly Ser Ala Glu Gln Arg Arg Arg Gly Leu Pro Gly Leu Arg
20 25 30

Ala Pro Gln Pro Cys Pro Pro Arg Arg Pro Pro Ala Cys Pro Gly Val
35 40 45

Pro Arg Arg Pro Pro Ala Gly
50 55

<210> 104

<211> 215

<212> PRT

<213> Homo sapiens

<400> 104

Val Arg Gly Arg Gly Gly Ala Gly Leu Ala Arg Asp Thr Ala Arg
1 5 10 15

Asp Trp Val Ser Phe Gln Gly Asp Ala Arg Pro Ala Gly Ala Val Glu
20 25 30

Glu Pro Gly Gly Arg Arg Arg Ser Leu Leu Gly Pro Arg Pro Arg Arg
35 40 45

Leu His Pro His Leu Leu Phe Pro Ala Gly Ala Ala Arg Arg Gly Leu
 50 55 60
 Gly Ala Arg Ala Ala Ala Leu Gly Gln Arg Gly Arg Gly Ala Ala Ala
 65 70 75 80
 Cys Ala Arg Ser Trp Cys Arg Cys Ala Arg Ser Ala Trp Ala Thr Ala
 85 90 95
 Pro Thr Ser Trp Cys Val Ser Ala Ser Ala Ala Ala Pro Ala Ala Ala
 100 105 110
 Arg Ala Leu His Thr Thr Ser Ala Trp Pro Ala Tyr Trp Ala Pro Gly
 115 120 125
 Pro Cys Asp Arg Pro Arg Ala Pro Gly Pro Ser Ala Ser Pro Ala Ala
 130 135 140
 Asp Pro Arg Ala Thr Lys Arg Ser Pro Ser Trp Thr Ser Thr Ala Pro
 145 150 155 160
 Gly Glu Pro Trp Thr Ala Ser Pro Pro Pro Pro Ala Ala Ala Trp Ala
 165 170 175
 Glu Gly Ser Leu Gln Gly Phe Ala Asp Trp Thr Leu Thr Gly Gly Ser
 180 185 190
 Ser Cys Leu Gly Pro Ser Arg Arg Val Pro Leu Ala Ser Gly Leu Ser
 195 200 205
 Gln Gly Arg Arg Pro Gln Ser
 210 215

<210> 105
 <211> 6
 <212> PRT
 <213> Homo sapiens

<400> 105
 Glu Ala Pro Ala Gly Gly
 1 5

<210> 106
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 106
 Trp Ile Ser Ser Pro Asn Arg
 1 5

<210> 107
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 107
 Leu Ala Ala Pro Glu Pro Ser Pro Cys Gly Ser Gln Pro Lys Arg His
 1 5 10 15

Gln Arg Pro Gln Leu Trp Ser
 20

<210> 108
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 108
 Pro Leu Ser Phe Ser Glu Pro Cys Leu Leu Ile Trp Lys Lys Gly Ile
 1 5 10 15
 Lys Pro Phe Thr Ser Trp Ser Cys Glu Arg Ile Ala Ala Lys His Leu
 20 25 30
 Thr His Ser Lys Val Pro Ser Ala Ala Thr Ser Ala Gly Leu Ser Leu
 35 40 45
 Ala Val
 50

<210> 109
 <211> 46
 <212> PRT
 <213> Homo sapiens

<400> 109
 Ala Pro Cys Ser Ser Pro Gly Glu Thr Gly Val Ala Gly Arg Ser Pro
 1 5 10 15
 Thr Lys Asp Asn Ser Ser Leu Asn Leu Gln Ala Ala Ser Thr Gly Gly
 20 25 30
 Trp Gly Asn Ser Ser Thr Met Ala Asp Gly Arg Ser Trp Cys
 35 40 45

<210> 110
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 110
 Arg Trp Asn Leu Asp Leu Glu Ala Ser Pro Arg Cys Pro Thr Ala Pro
 1 5 10 15
 Gly Leu Gly Gly Arg
 20

<210> 111
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 111
 Val Val Leu Pro Val Thr Pro Thr Trp Tyr
 1 5 10

<210> 112
 <211> 4
 <212> PRT
 <213> Homo sapiens

<400> 112

APR 11 2000

Gly Lys Ala Ala
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<210> 113
<211> 61
<212> PRT
<213> Homo sapiens

<400> 113
Leu Val Arg Glu Ser Arg Ala Trp Leu Gly Gln Arg Leu Gly Val Gly
1 5 10 15
Gly Lys Met Val Arg Glu Gly Pro Gly Glu Trp Glu Glu Glu Arg Asp
20 25 30
Phe Ser Glu Trp Ser Val His Ser Gly Asp Ser Ser Pro Gly Leu Pro
35 40 45
Glu Ala Ala Asn Pro Leu Tyr Trp Asn Leu Gly Pro Ser
50 55 60

<210> 114
<211> 6
<212> PRT
<213> Homo sapiens

<400> 114
Val Ser Pro Pro His Ser
1 5

<210> 115
<211> 87
<212> PRT
<213> Homo sapiens

<400> 115
Glu Pro Met Pro Gly Leu Ile Ser Ala Arg Gly Gln Pro Leu Leu Glu
1 5 10 15
Val Leu Pro Pro Gln Ala His Leu Gly Ala Leu Phe Leu Pro Glu Ala
20 25 30
Pro Leu Gly Leu Ser Ala Gln Pro Ala Leu Trp Pro Thr Leu Ala Ala
35 40 45
Leu Ala Leu Leu Ser Ser Val Ala Glu Ala Ser Leu Gly Ser Ala Pro
50 55 60
Arg Ser Pro Ala Pro Arg Glu Gly Pro Pro Pro Val Leu Ala Ser Pro
65 70 75 80
Ala Gly His Leu Pro Gly Arg
85

<210> 116
<211> 201
<212> PRT
<213> Homo sapiens

<400> 116
Glu Gly Glu Gly Ala Gly Arg Gly Trp Pro Gly Thr Pro Arg Val Thr
1 5 10 15

Gly Ser His Ser Arg Gly Thr His Gly Pro Leu Val Gln Trp Lys Ser
 20 25 30
 Pro Ala Ala Ala Ala Ala Ala Phe Ser Ala Arg Ala Pro Ala Ala Cys
 35 40 45
 Thr Pro Ile Cys Ser Ser Pro Arg Gly Pro Arg Gly Ala Gly Trp Gly
 50 55 60
 Pro Gly Gln Pro Arg Ser Gly Ser Gly Gly Ala Gly Leu Pro Pro Ala
 65 70 75 80
 Leu Ala Ala Gly Ala Gly Ala Arg Ala Arg Pro Gly Pro Pro Leu Arg
 85 90 95
 Arg Ala Gly Ala Phe Pro Leu Leu Gln Arg Leu Leu Pro Pro Arg Ala
 100 105 110
 Leu Ser Thr Arg Pro Gln Pro Gly Gln Pro Thr Gly Arg Arg Gly Pro
 115 120 125
 Ala Thr Ala Pro Gly Leu Pro Ala Arg Gln Pro Ala Leu Leu Pro Thr
 130 135 140
 His Ala Leu Arg Ser Gly Leu Leu His Gly Arg Gln Gln His Leu Glu
 145 150 155 160
 Asn Arg Gly Pro Pro Leu Arg His Arg Leu Arg Leu Pro Gly Leu Arg
 165 170 175
 Ala Arg Ser Arg Ala Leu Gln Thr Gly Pro Leu Pro Val Ala Leu Pro
 180 185 190
 Ala Trp Asp Pro Pro Ala Glu Ser His
 195 200

<210> 117
 <211> 32
 <212> PRT
 <213> Homo sapiens

<400> 117
 Pro Ala Ala Ser Ala Arg Asp Glu Gly Leu Lys Ala Glu Arg Pro Leu
 1 5 10 15
 Pro Val Gly Asp Gly Tyr His Pro Arg Thr Gly Glu Gly Thr Thr Asp
 20 25 30

<210> 118
 <211> 22
 <212> PRT
 <213> Homo sapiens

<400> 118
 Gln Pro Gln Ser Pro His Pro Ala Asp Pro Ser Leu Lys Asp Thr Arg
 1 5 10 15
 Asp Leu Ser Tyr Gly Ala
 20

<210> 119

<211> 23

<212> PRT

<213> RAT

<400> 119

Ser Ser Ser Phe Cys Thr Leu Asp Pro Tyr Val Ala Leu Pro Gly Thr
1 5 10 15

Ala Pro Arg Gly Leu Thr Ser
20

<210> 120

<211> 46

<212> PRT

<213> RAT

<400> 120

Glu Pro Gln Leu Asn Arg Lys Leu Arg Pro Gln Ala Asp Glu Gly Gln
1 5 10 15

Thr Glu Pro Gly Lys Met Thr Glu Pro Leu Thr Asn Ser Pro Lys Val
20 25 30

Phe Met Asp Pro Ser Ser Thr Asp Ser Arg Asn Leu Ser Tyr
35 40 45